



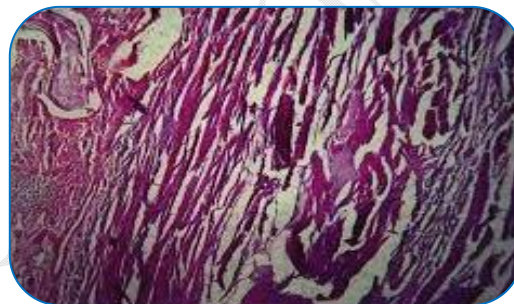
## A NEW SPECIES OF CESTODE *CALYCOBOTHRIUM CHATURAII* FROM THE SPIRAL VALVE OF TRYGON SEPHEN (CUVIER, 1871)

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### ABSTRACT :

The present study deals with the new species of cestode parasites of the marine water fish *Trygon sephen* named as *Calycobothrium chaturaii*, which was characterized by scolex circular, the presence of 14 tentacles, unbranched, finger like tentacles, neck present, segments longer than broad, testes numerous, cirrus pouch extending halfway across segments, Genital pore irregularly alternating, ovary compact, vitellaria extending whole length of proglottis, vagina anterior to cirrus pouch.



**KEYWORDS :** Cestoda, *Calycobothrium chaturaii*, *Trygon Sephon*

### INTRODUCTION

The genus *Calycobothrium* was discovered by Southwell in 1911, with its type species *C. typicum* from *Aetobatis narinari* (Euphrasen, 1790) at Ceylon, Later on no species is added to this genus. Linton (1916) reported *T. Marsupium* from *Aetobatis nari nari*, Yamaguti (1934) recorded *T. squatinae* from *Squatinae japonica* at Japan, Toyama Bay, Japan. Southwell (1925) describe, *T. yorkei* from *Aetobatis narinari* at Puri, Orissa, India. Subhpradha (1955) described *T. elongatum* & *T. minimum* from *Rhynchobatus djeddensis* in India. Chincolikar (1976) added one new species to this genus i.e. *T. madhukari* from *Trygon* sp. At Ratnagiri. Jadhav & Shinde (1981) described *T. singhii* from *Trygon zugei* at Bombay. In 1983 Jadhav erected a new species to this genus *T. bombayensis* which is collected from Bombay, Jadhav et al (1988) described *T. aurangabadensis* from *Aetobatis narinari* collected from Arabia sea.

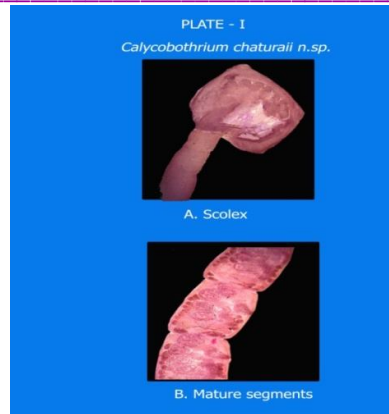
The present description deals with *Calycobothrium chaturaii* n.sp. from the spiral valve of *Trygon sephen* (Cuvier, 1871) at Alibag (West Coast of Maharashtra, India) in the year June 2009 to May 2011.

### MATERIAL AND METHODS:

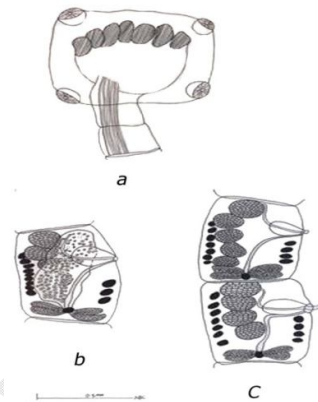
One hundred and ninety five specimens of cestode were collected from the spiral valve of *Trygon sephen* (Cuvier, 1871) at Alibag District (West Coast of Maharashtra, India) in the year June 2009 to May 2011. Seven specimens were taken for taxonomical identification.

### RESULT AND DISCUSSION:

One hundred and ninety five specimens of cestode were collected from the spiral valve of *Trygon sephen* (Cuvier, 1871) at Alibag District (West Coast of Maharashtra, India) in the year June 2009 to May 2011.



**Fig.1. Microphotograph of *Calycobothrium chaturaii* n.sp.**



**Fig.2. Camera Lucida diagram of *Calycobothrium chaturaii* n.sp.**

Scolex is quadrangular in shape. It measures 0.6359 (0.5388-0.7330) in length and 0.7063 (0.6650-0.7475) in breadth. Anterior region bears with 4 suckers. The suckers measures 0.08737 (0.04854-0.1262) in length and 0.09951 (0.04854-0.1504) in breadth. Posterior region is represented by '18' tentacles, which evaginate through the central cavity. The tentacles measures 0.1577 (0.1213-0.1941) in length and 0.06796 (0.04854-0.08737) in breadth. Neck is long and measures 0.1723 (0.1650-0.1796) in length and 0.2402 (0.2378-0.2427) in breadth.

The mature segments are broader than long, measures 0.6480 (0.6407-0.6553) in length and 0.4951 (0.4417-0.5485) in breadth. Testes are large, preovarian and four to five in numbers, oval in shape and situated in the center of the mature segments measures 0.1116 (0.07766-0.1456) in length and 0.1383 (0.1067-0.1699) in breadth. Cirrus pouch is rounded, elongated above the middle and measures 0.2257 (0.1941-0.2572) in length and 0.08980 (0.06310-0.1213) in breadth. Cirrus is short, slightly curved measures 0.2087 (0.1990-0.2184) in length and 0.1213 (0.09708-0.01456) in breadth. Seminal vesicle short, curve anteriorly measures 0.1893 (0.1844-0.1941) in length and 0.00728 (0.00485-0.09708) in breadth. Genital pores are sub-marginal, irregularly alternate and measure 0.06796 (0.06310-0.07281) in length and 0.02669 (0.01941-0.03398) in breadth.

The vagina is anterior to cirrus pouch, measures 0.4417 (0.4368-0.4466) in length and 0.01213 (0.09708-0.01456) in breadth. Receptacle seminis slightly swollen, opens into ootype measures 0.08495 (0.07766-0.08252) in length and 0.01941 (0.01456-0.02427) in breadth.

Ovary is bilobed, elongated laterally and placed at the posterior side of the segments measures 0.3155 (0.2766-0.3543) in length and 0.06553 (0.03883-0.09223) in breadth. The ootype is situated at the middle region of the ovary measures 0.04854 in diameter.

Vitellaria are granular, sub-cortical placed in single row, except the cirrus pouch and pre-ovarian. The gravid segments are always longer than broad measures 0.7281 (0.6699-0.7864) in length and 0.4611 (0.3980-0.5242) in breadth.

The uterus is sac like in shape, broader at anteriorly and narrow posteriorly, measures 0.5218 (0.4216-0.6310) in length and 0.1699 (0.07281-0.2669) in breadth. It consists of numerous eggs.

The genus *Calycobothrium* was erected by Southwell in 1911 as a type species *C. typicum* from *Aetobatis narinari* at Ceylon, which was characterized by scolex circular, the presence of 14 tentacles, unbranched, finger like tentacles, neck present, segments longer than broad, testes numerous, cirrus pouch extending halfway across segments, Genital pore irregularly alternating, ovary compact, vitellaria extending whole length of proglottis, vagina anterior to cirrus pouch.

The present cestode parasite *Calycobothrium chaturaii* n.sp. is differ from *C. typicum* with the following characters, Scolex quadrangular Vs. circular, tentacles eighteen Vs. fourteen in number, Testes four to five Vs. numerous, Ovary bilobed Vs. compact. Vitellaria follicular Vs. granular.

The above noted characters are valid enough to accommodate these worms under the genus *Calycobothrium* as a new species of the genus and hence the name *Calycobothrium chaturaii* n.sp. is proposed after the name of the authour's mother Late. Chaturabai Bhawanji Khodke.

**Table 1. Comparative chart showing an account of old and new species of the genus *Calycobothrium*, Southwell, 1911.**

Species	<i>C. typicum</i> , Southwell, 1911	<i>C. chaturaii</i> n.sp.
<b>Characters</b>		
<b>Country</b>	Ceylon	India
<b>Host</b>	<i>Aetobatis narinari</i>	<i>Trygon sephan</i>
<b>Scolex</b>	Circular	Quadrangular
<b>Tentacles</b>	14	18
<b>Neck</b>	Present	Present
<b>Mature segments</b>	Longer than broad	Broader than long
<b>Testes</b>	Numerous	Large, oval, preovarian, 4 to 5 in numbers
<b>Cirrus pouch</b>	Extending half way across proglottids	Rounded, elongated, above the middle.
<b>Cirrus</b>	Spinose	Protrusible
<b>Vas deferens</b>	Absent	Short, slightly curved
<b>Genital pores</b>	Irregularly alternate	Sub marginal, irregularly alternate
<b>Vagina</b>	Anterior to cirrus pouch	Anterior to cirrus pouch
<b>Ovary</b>	Compact	Bilobed
<b>Vitellaria</b>	Granular	Granular

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